

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): An apparatus for receiving a signal of digital broadcasting service, comprising:

an array antenna having a plurality of antenna elements, each antenna element for receiving signals from the digital broadcasting service;

a demodulation means for demodulating the broadcast signals, each corresponding to each of antenna elements included in the array antenna;

beam-forming means for receiving ~~modulated~~ demodulated signals of the demodulation means to generate a predetermined number of beamformed signals based on different ~~a~~ beam-forming weights in order to steer each of the predetermined number of beamformed signals to a predetermined direction according to the ~~modulated~~ demodulated signals; and

beam selection means for selecting one of the predetermined number of beamformed signals based on each predetermined direction of the predetermined number of beamformed signals, wherein the selected beamformed signal has the most desirable direction,

wherein the demodulation means includes a plurality of demodulators, the number of demodulators equaling the number of antenna elements in the array antenna.

Claim 2 (Previously Presented): The apparatus as recited in claim 1, wherein the array antenna is a predetermined number of axis linear arrays, each having a predetermined number of antenna elements.

Claim 3 (Previously Presented): The apparatus as recited in claim 1, wherein the array antenna is at least one circular-type array antenna having a predetermined number of antenna elements.

Claim 4 (Previously Presented): The apparatus as recited in claim 1, wherein the array antenna is at least one planar array antenna having a predetermined number of antenna elements.

Claim 5 (Canceled)

Claim 6 (Currently Amended): An apparatus for receiving a signal of digital broadcasting service, comprising:

switched beamforming means for generating a beamformed signal in order to direct a predetermined number of angles by applying a beam-forming weight to a received signal from the digital broadcasting service and selectively receiving a signal of a desired direction; ~~and~~

beam selection means for selectively receiving the signal of desired direction according to a predetermined number of beam forming signals, the beam selection means including an array antenna, and

a demodulation means for demodulating the received signal,
wherein the demodulation means includes a plurality of demodulators, the number of demodulators equaling a number of antenna elements in the array antenna.

Claim 7 (Previously Presented): The apparatus as recited in claim 6, wherein the switched beamforming means includes:

beam-forming means for generating a predetermined number of beamformed signals by applying beam-forming weights in order to steer the beam to a predetermined direction to receive a digital broadcasting signal,

wherein the predetermined number of beam forming signals are generated by the beam forming means.

Claim 8 (Previously Presented): The apparatus as recited in claim 7, wherein the beam-forming means outputs a signal by eliminating multipath receiving signals to a channel equalizer to improve equalization performance of the channel equalizer.